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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/698,314

10/27/2000

David Carrel

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04/18/2005

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EXAMINER

HAN, CLEMENCE S

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,314

Applicant(s)

CARREL, DAVID

Examiner

Clemence Han

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/07/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-19 and 23-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-19 and 23-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1, 5-19 and 23-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Rao et al. (US Patent 6,850,531).

Regarding claim 1 and 19, Rao teaches a method comprising: receiving a number of Internet Protocol (IP) packets on a real circuit and a number of virtual circuits, wherein the number of virtual circuits are within the real circuit such that the number of Internet Protocol (IP) packets on the real circuit have an IP over Ethernet encapsulation and the number of Internet Protocol (IP) packets on the number of virtual circuits have a Point-to-Point over Ethernet encapsulation (Column 24 Line 30-39); deencapsulating the number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation (Column 6 Line 61-62); deencapsulating the number of Internet Protocol (IP) packets having the Point-to-Point over Ethernet encapsulation (Column 6 Line 61-62); and forwarding the

number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation and the Point-to-Point over Ethernet encapsulation based on an address stored in the number of Internet Protocol (IP) packets (Column 12 Line 6-15).

Regarding claim 5 and 23, Rao teaches a method comprising: receiving a number of Internet Protocol (IP) packets over Ethernet on a real circuit, each IP packet over Ethernet having an Ethernet header and an IP address (Column 24 Line 30-39); removing the Ethernet header from the number of IP packets (Column 6 Line 61-62); receiving a number of IP packets within a Point-to-Point Protocol (PPP) over Ethernet on at least one virtual circuit, wherein each of the number of IP packets within the PPP over Ethernet includes a PPP header, a PPP over Ethernet (PPPoE) header, an Ethernet header and an IP address, wherein the at least one virtual circuit runs within the real circuit (Column 24 Line 30-39); removing the PPP header and the PPPoE header from the number of IP packets within the PPP over Ethernet (Column 6 Line 61-62); removing the Ethernet header from the number of IP packets within the PPP over Ethernet (Column 6 Line 61-62); and forwarding the number of IP packets over Ethernet and the number of IP packets within PPP over Ethernet based on the IP address (Column 12 Line 6-15).

Regarding claim 6, 11, 24 and 29, Rao teaches the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet encapsulated in an Asynchronous Transfer Mode (ATM) protocol layer (Column 24 Line 30-39).

Regarding claim 7, 12, 25 and 30, Rao teaches removing the ATM protocol layer from the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet (see Figure 28 and Column 6 Line 61-62).

Regarding claim 8, 13, 17, 26 and 31, Rao teaches calculating the number of IP packets within the PPP over Ethernet that are being received from the at least one virtual circuit (Column 22 Line 4-7).

Regarding claim 9, 14, 18, 27 and 32, Rao teaches performing rate limiting on the at least one virtual circuit based on the number of calculated IP packets within the PPP over Ethernet (Column 21 Line 53-56).

Regarding claim 10 and 28, Rao teaches a method comprising: receiving a number of different data packets over Ethernet on both a real circuit and a number of virtual circuits running within the real circuit (Column 24 Line 30-39); recursively performing the following for each of the number of different data packets: upon determining that a received data packet is an Internet Protocol (IP) packet over Ethernet on the real circuit (Column 11 Line 39-41), removing an

Ethernet header from the received data packet (Column 6 Line 61-62) and forwarding the IP packet based on an IP address stored in the IP packet (Column 12 Line 6-15); and upon determining that a received data packet is an IP packet within a Point-to-Point Protocol (PPP) over Ethernet on one of the number of virtual circuits (Column 11 Line 39-41), removing an Ethernet header, a PPP header and a PPP over Ethernet (PPPoE) header from the data packet (Column 6 Line 61-62) and forwarding the IP packet based on an IP address stored in the IP packet (Column 12 Line 6-15).

Regarding claim 15, Rao teaches a network element comprising: a number of input/output (I/O) cards (Figure 2) coupled to a number of real circuits, wherein each of the number of real circuits include at least one virtual circuit, the number of I/O cards to receive a number of Internet Protocol (IP) packets over Ethernet having an IP over Ethernet encapsulation on the real circuit, to receive a number of IP packets within a Point-to-Point Protocol (PPP) over Ethernet encapsulation on the at least one virtual circuit (Column 24 Line 30-39), to deencapsulate the number Internet Protocol (IP) packets having the IP over Ethernet encapsulation (Column 6 Line 61-62) and to deencapsulate the number of Internet Protocol (IP) packets having the Point-to-Point Protocol over Ethernet encapsulation (Column 6 Line 61-62); and a forwarding card (Figure 4) having an IP address table 90, the

forwarding card to receive the number of IP packets from the number of I/O cards and to forward the IP packets based on the IP address stored in the IP packet and the IP address table (Column 12 Line 6-15).

Regarding claim 16, Rao teaches a control card 26 having a database of configuration information, the configuration information used to configure the forwarding card and the number of I/O cards (Column 7 Line 3-16).

Response to Arguments

3. Applicant's arguments with respect to claim 1, 5-19 and 23-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to the invention in general.

U.S. Patent 6,778,525 to Baum et al.

U.S. Patent 6,775,271 to Johnson et al.

U.S. Patent 6,711,162 to Ortega et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is

(571) 272-3158. The examiner can normally be reached on Monday-Thursday 7 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Han
Clemence Han
Examiner
Art Unit 2665



STEVEN NGUYEN
PRIMARY EXAMINER